1889. The specimens although scanty show the paroicous inflorescence characteristic of the species and are infested with the peculiar fungous growth which seems to be almost invariably present. The plant has also been reported from Greenland, California and Alaska, but these are apparently the only North American stations that have been recorded. *Scapania curta* and *Anthelia Juratzkana* have recently been described by Howe,[1] who also points out the differences between the latter species and *A. julacea* (L.) Dumort., a plant which may likewise be expected in the White Mountains.

14. RADULA OBCONICA Sulliv. The range of this species as given in the Manual is from New Jersey to Ohio. It has been collected by the writer at Hamden, Connecticut.

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VARIATIONS OF GLAUX IN AMERICA.

M. L. FERNALD.

THOSE who are familiar with our sea-side flora have doubtless many times come across the blue-green patches of *Glaux* occupying areas of salt-marsh near high-water mark. At any time in summer or fall the plant attracts attention, and if it is found in June or early July it immediately claims our interest by the delicate flowers in the upper leaf-axils. Although the plant belongs to the natural order *Primulaceae* it has no corolla, but instead the calyx is much developed and beautifully colored, either white, rose-pink, or crimson, with more deeply hued centre.

The plant familiar to most botanists whose sea-shore collecting has been only in New England is simple or with a few erect branches, and it has oval or broadly elliptic-oblong leaves generally a centimeter long and rounded at the tip. This erect plant is common in salt-marshes and on muddy sea-shores from the Gulf of St. Lawrence to Nantucket — and it is said to extend even to New Jersey. It was, therefore, of no special interest, in early July last, to find the common erect plant growing below tide-limit on a muddy shore at Cutler, Maine.

[1] Mem. Torrey Club, 7. 1899.

But when, in crossing the flat between Schooner Cove and Corbett's Point, Dr. George G. Kennedy drew attention to a little prostrate *Glaux*, we were greatly interested, for to the others of the party (including Messrs. Emile F. Williams, J. Franklin Collins, and the writer) this form of the plant was equally unfamiliar. The plant at Cutler formed prostrate rosettes rarely a decimeter across, its leaves were narrowly oblong and bluntly pointed, and the flowers were deeply colored throughout, the ordinary white of the calyx-tips being replaced in these plants by a bright lavender. This prostrate plant on the shore of Schooner Cove was well below the high-water mark and during a large part of the day it was completely submerged by sea-water; and since the plant there grew in a very limited area its peculiar habit and deeply colored flowers were thought to be due perhaps to the periodical salt bath it was forced to endure.

Later, however, on July 24th, Mr. Williams and the writer had the good fortune to find the little prostrate *Glaux* with the commoner erect New England form occupying many acres of salt-marsh by the Baie des Chaleurs near Bathurst, New Brunswick. There the two plants grew under identical conditions, large patches of the taller erect plant occurring side by side with equally extensive areas of its dwarf ally. Both forms were somewhat past flowering and many specimens had fairly mature fruit, and it was found that the plants differed not only in the points already noted at Cutler, but that the fruit of the erect broad-leaved form was larger than in the other. Characteristic material of the two forms from the shore of the Baie des Chaleurs was collected, and from a comparison of these and the Cutler plants with the American and Old World specimens in the Gray Herbarium and the herbarium of the New England Botanical Club the following conclusions are drawn.

The prostrate plant first noted at Cutler and afterwards found in great abundance at Bathurst is not confined in America to the "north shore," but has been collected at two points at least on the Massachusetts coast: — Rockport (*J. H. Sears*) and Somerville (*F. S. Collins*). This form proves to be the common *Glaux maritima* of northern Europe and the alkaline districts of interior Asia. But a large number of Old World specimens show that the true (European) *Glaux maritima* is not always prostrate nor even freely branched, for occasional individuals are subsimple and others have short erect branches. In its narrower pointed leaf and small fruit, however, the

Old World material is quite like the smaller plants of Bathurst and Cutler; and the larger subsimple or diffuse specimens from Europe are matched by plants collected by the writer in Maine — at Cape Elizabeth and Southport. The same narrow-leaved plant, though sometimes with a stronger tendency to fastigiate erect branching, occurs in the alkaline district of North America, from Minnesota to the Rocky Mountains.

The other form of *Glaux*, the common erect plant of the New England coast with larger oval or broad-oblong round-tipped leaves and larger fruit, does not seem to occur in Europe, although closely approached by a large simple Scandinavian plant which, however, has narrower blunt-pointed leaves. But, as shown in the Gray Herbarium, this broad-leaved form of our Atlantic coast is also on the Pacific shores from Alaska to California, and even in the interior of the latter state, and like many other characteristic plants of eastern America it occurs upon the coasts of Japan and Amur.

The distinguishing features and the distribution of the two forms of *Glaux* as now understood are:

GLAUX MARITIMA, L. Sp. 207. *Diffusely branched* (rarely simple), the branches-prostrate, loosely ascending, or sometimes erect: *leaves linear to oblong*, the larger 3 to 12 mm. long, 1.5 to 6 mm. broad, *bluntly pointed*: flowers 3 to 5 mm. long, variously colored with white, rose pink or lavender, and crimson: *mature capsule* 2 to 3 mm. long, *2 to 2.5 mm. broad.*— Locally along the coast from Baie des Chaleurs, New Brunswick, to eastern Massachusetts; in alkaline districts inland from Minnesota to Saskatchewan, Nevada and Oregon; and in Europe and interior Asia. Passing to

Var. **obtusifolia.** *Erect* (0.5 to 3 dm. high), simple or with few erect branches: *leaves oval or broadly oblong*, the principal ones 8 to 15 mm. long, 4 to 8 mm. broad, *with rounded tips: mature capsule* 3 mm. long, *2.5 to 4 mm. broad.*— Salt marshes and wet muddy or sandy seashores (rarely inland), Gulf of St. Lawrence to Nantucket; Alaska to California; and Amur and Japan. Specimens examined — QUEBEC, Anticosti (*Pursh*): NEW BRUNSWICK, Bathurst, July 24, 1902 (*Williams & Fernald*): PRINCE EDWARD ISLAND, Tracadie Beach, Aug. 6, 1901 (*Churchill*): NOVA SCOTIA, Grand Narrows, Cape Breton, July 27, 1898 (*John Macoun*, Herb. Geol. Surv. Can. no. 19,849): MAINE, Cutler, July 4, 1902 (*Kennedy, Williams, Collins & Fernald*); Mt. Desert Island, June 23, 1890 (*Faxon*); Great

Cranberry Isle, July 17, 1897 (*Williams*); Cape Elizabeth, July 18, 1861 (*Boott*); Biddeford, July, 1891 (*Regester*); Biddeford Pool, July 28, 1900 (*Kennedy*); Kennebunk, July 23, 1885 (*Swan*); Kennebunkport, July 18, 1888 (*Kennedy*); Wells, June 13, 1865 (*Boott*), July 28, 1886 (*Deane*), July 23, 1898 (*Parlin & Fernald*): MASSACHUSETTS, Somerville, June 4, 1881 (*F. S. Collins*); Nantucket, Aug. 18, 1878 (*Faxon*): ALASKA, Sitka (*Mertens, Tiling*); Juneau, July 31, 1891 (*Cooley*): BRITISH COLUMBIA, Saturna Island, 1858 (*Lyall*): Renfrew, Vancouver Island, 1901 (*Rosendahl & Brand*, no. 63): WASHINGTON, without locality, 1854 (*Cooper*); Bellingham Bay, July, 1890 (*Suksdorf*, no. 989): CALIFORNIA, Cisco, 1873 (*Bolander*); Martinez, April, 23, 1854 (*Bigelow*): AMUR, without locality (*Maximowicz*): JAPAN, Yezo, July 10, 1884 (*Miyabe*); Nambu, Nippon, 1865 (*Tschoniski*).

GRAY HERBARIUM.

POGONIA AFFINIS IN VERMONT.

L. R. JONES.

IT IS always a pleasure to learn of a more extended range or a new station for a rare orchid. This is especially true of one having so insecure a foothold as *Pogonia affinis*. Mrs. Henry Holt advised me of the discovery of what she regarded as that species the first of last June and Mr. Emile F. Williams who has kindly examined the flower and photographs since, has confirmed this opinion. Mrs. Holt found only one plant although diligent search was made for others. It was in a somewhat open, moist woodland near Burlington belonging to Mr. Henry Holt and since there is no danger that the natural environment will be changed the preservation of the station and the discovery of other plants is almost certain. Mrs. Holt transplanted this specimen to her orchid garden where it is apparently thriving; photographs and drawings were made and deposited with the dried flower in the herbarium of the University of Vermont. Mr. Williams in his recent list in RHODORA records this species from Connecticut and Massachusetts; Mrs. Holt's discovery therefore, not only adds Vermont to this list, but extends the range some two hundred miles